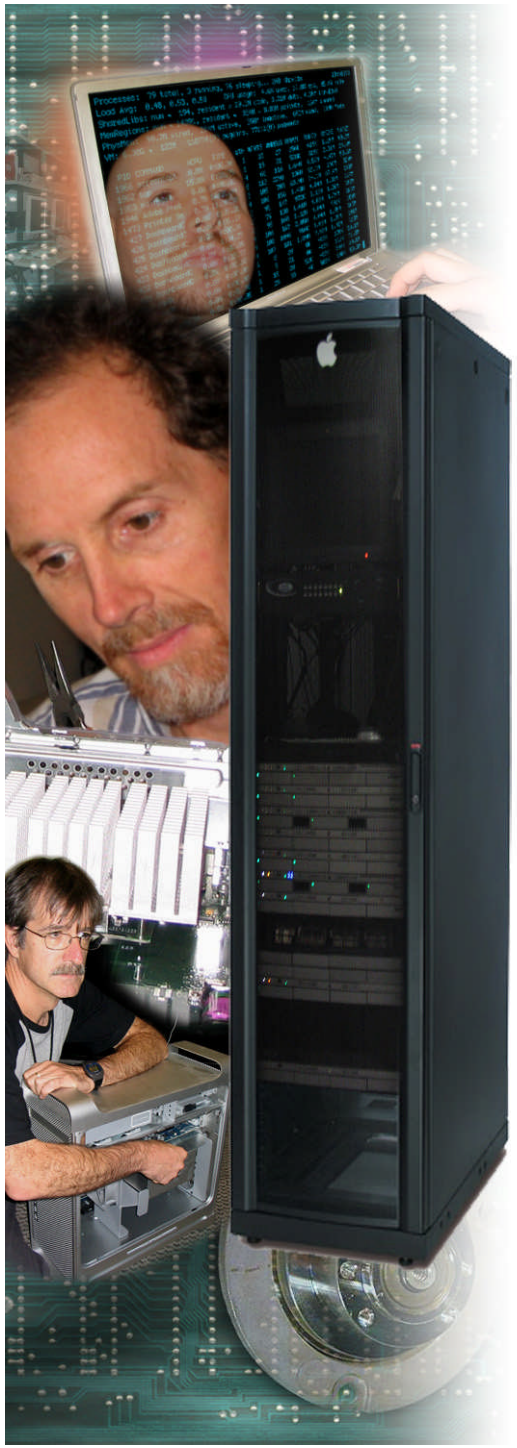

ARGONNE NATIONAL LABORATORY

APS Macintosh IT

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THE UNIVERSITY OF CHICAGO

Office of Science U.S. DEPARTMENT OF ENERGY

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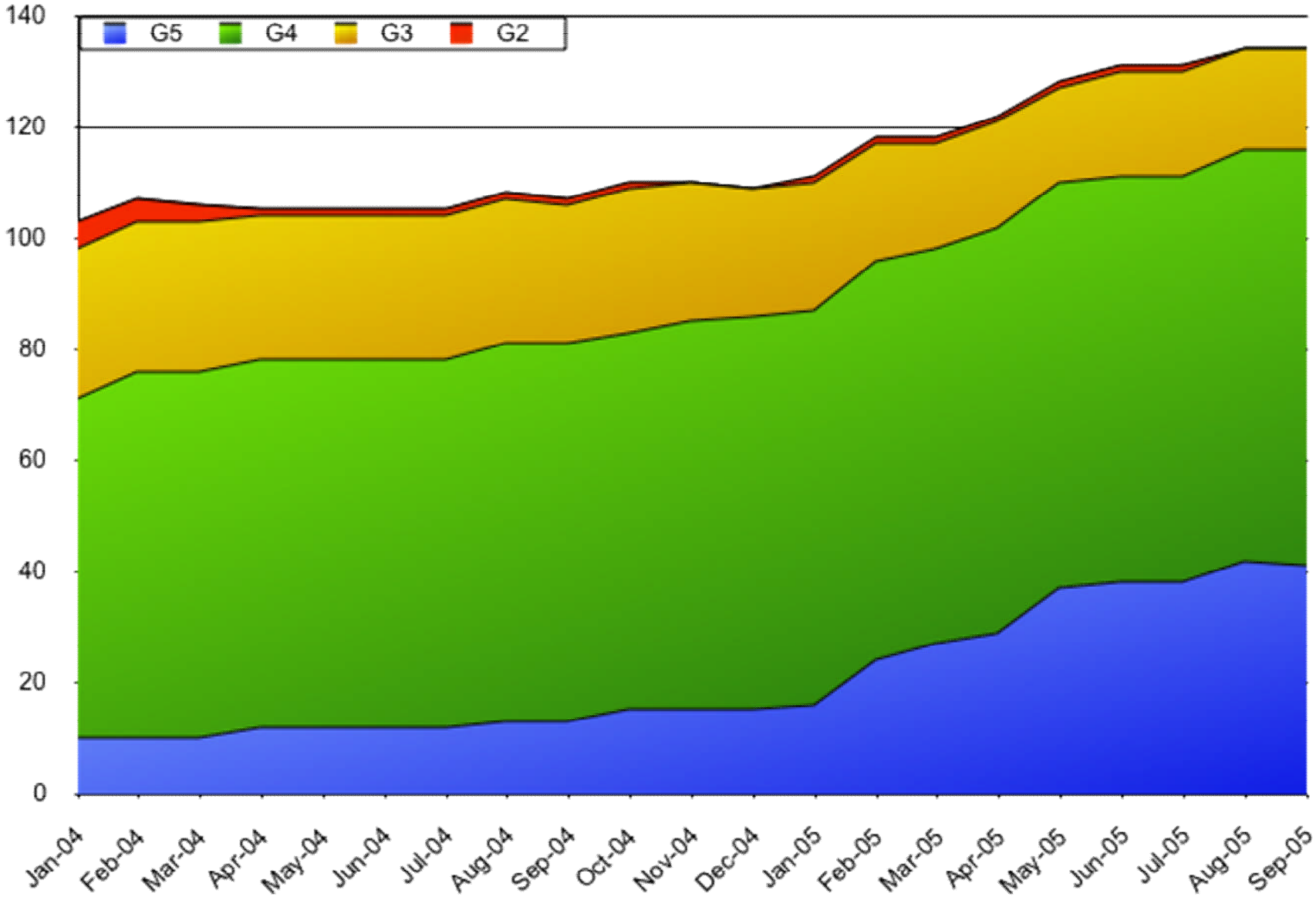
State of the Macintosh at Argonne

- Great! In fact, it's never been better
  - Stock has been at all time highs
  - Market share has been growing
  - ANL acceptance by MCS and CIS
  - Continued growth in APS
- Reasons for the growing Macintosh acceptance
  - Powered by Unix
  - No viruses, worms or malware to date
  - Many security features are built-in
  - Reliability
  - Support of industry standards
  - Multimedia capabilities
  - Moving to Intel

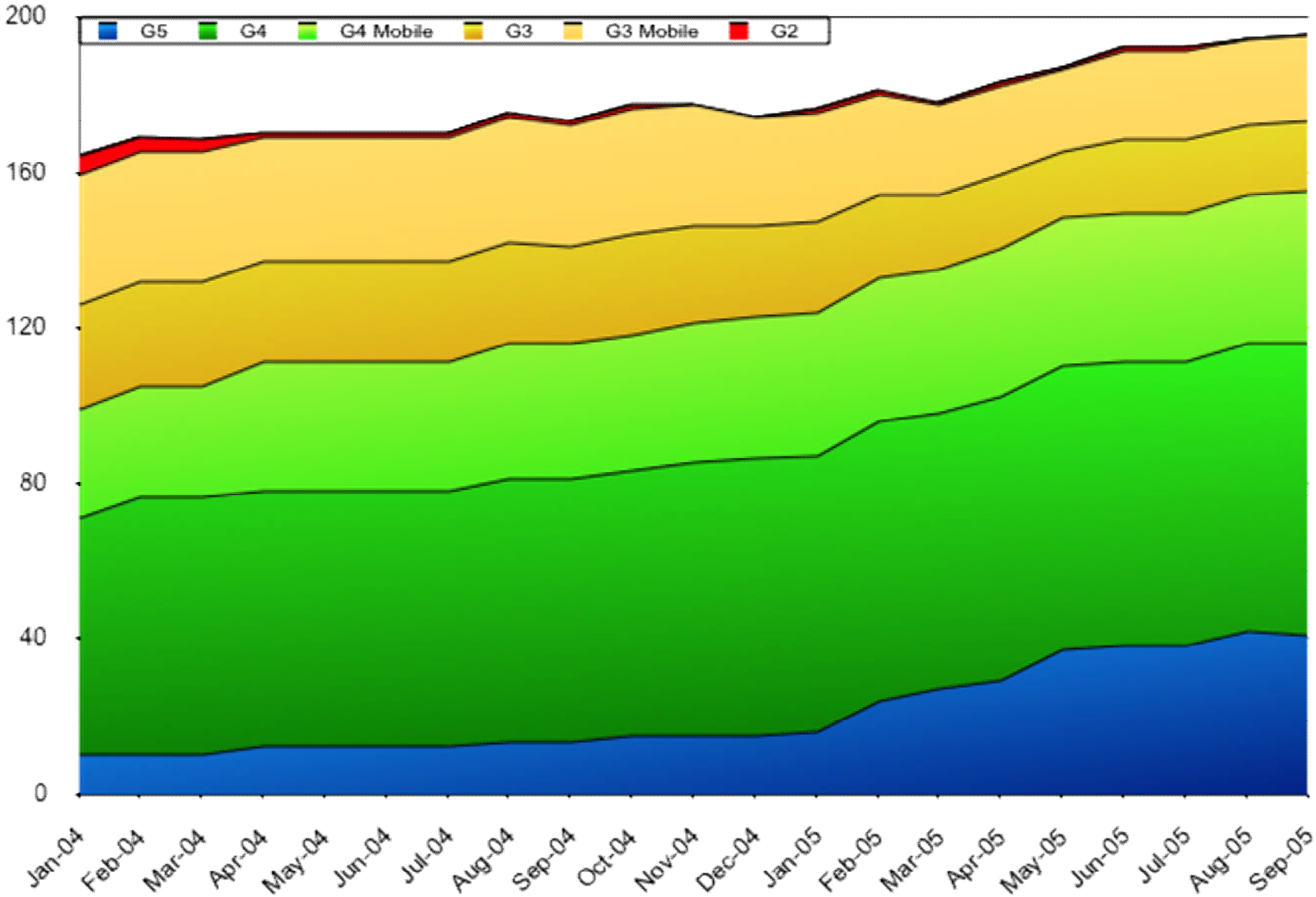
How do Scientists Use the Macintosh Computer at APS?

- Data visualization and analysis
  - IDL
  - IGOR
  - Kaleidagraph
- Data acquisition
  - IGOR-based systems
  - National Instruments based system
- Use built in X11 to view and use MEDM screens
- Create and edit video files
- Use standard Unix code
- xCode developement
- Basic Office application with extra features

Macintosh computers on LAN



Macintosh computers on LAN + Portables (Not at Home)




PowerBook G4

What does Macintosh Support do?

- Upgrade Macintosh hardware ~20%/year (5 year lifetime)
  - We still have 40 machines older than 5 years
- Provide software and hardware support
  - Upgrade Operating System
  - Install applications
  - Install system and security updates
- Manage Macintosh servers
  - Maintain Servers
  - Add new services
- Manage Macintosh backups
  - Add new client machines to backup set
  - Restore data for users

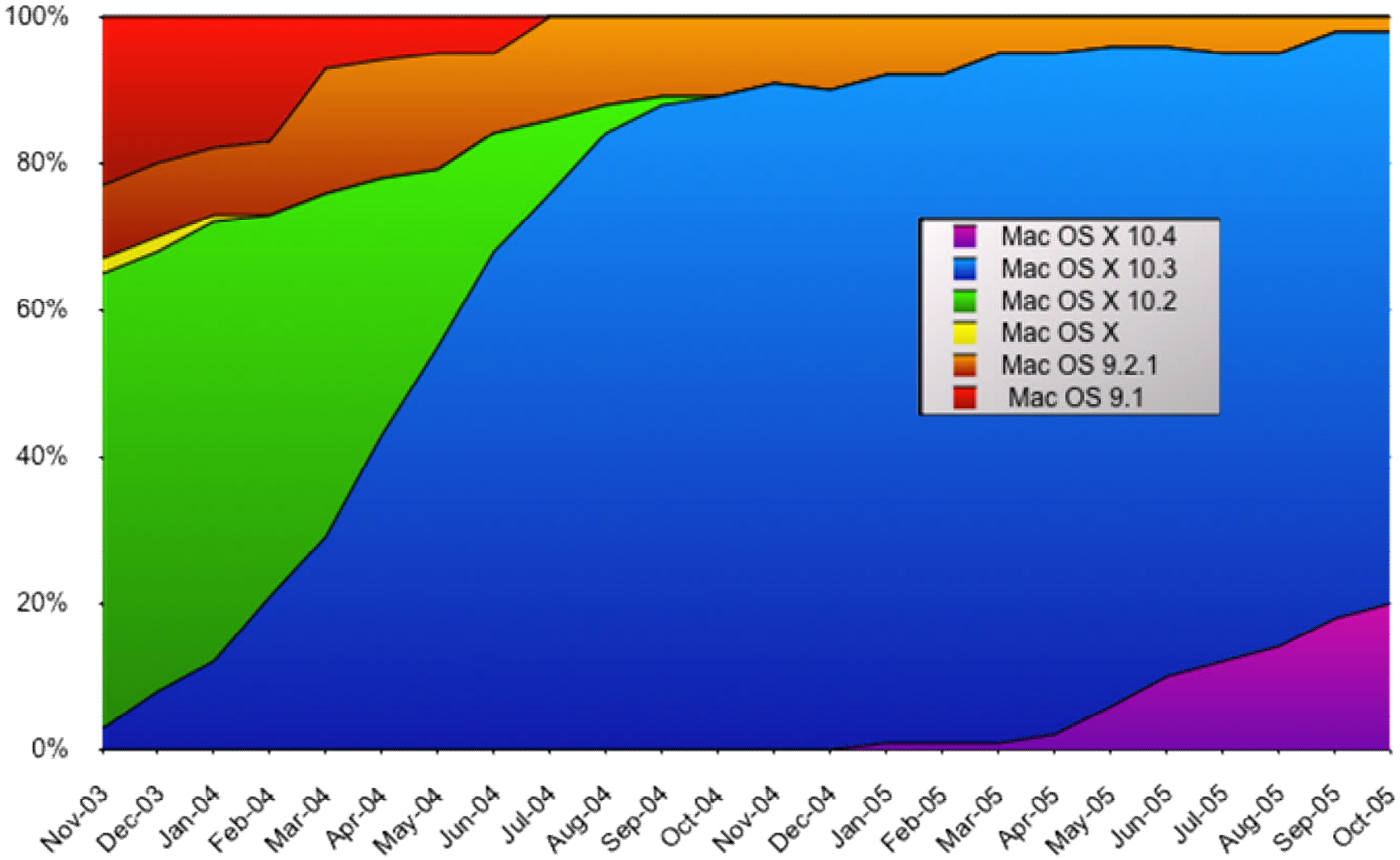
Management of Client Computers

- Hardware
  - Maintenance
  - Installation
- System Installation
  - Automate Configuration Management
    - *Standard images*
    - *Packages*
  - Still requires manual moving of user data
- Updates
  - Automate the Updates
    - *Apple Remote Desktop (ARD)*
    - *Software Update*
    - *Use of Packages*
- User requests can be demonstrated remotely using ARD

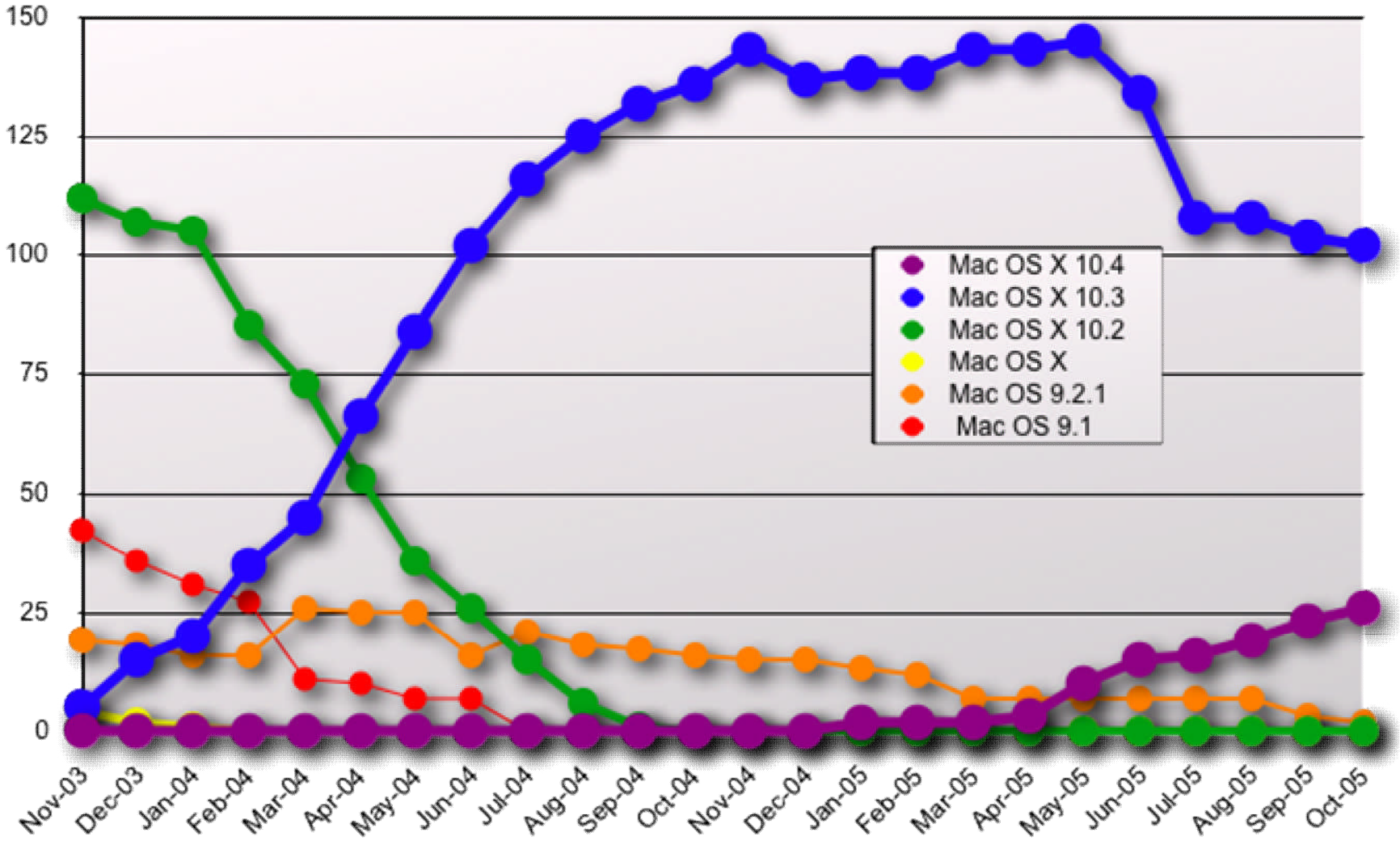
What is Apple Remote Desktop?

- Software tool that provides:
  - Ability to see and control the user's work space remotely
  - Ability to scan computers for information about:
    - *Versions of applications*
    - *Memory size/Disk space*
    - *Type of CPU*
  - Ability to remotely send files and packages to machines
    - *Can update multiple machines simultaneously*
  - Ability to remotely run Unix scripts on computers
- ARD has allowed us to automate a lot of our tasks on client and server machines.

Mac OS History



Mac OS History (continued)



Macintosh Servers

- APS Servers
  - File services for Macintosh users
  - Shared applications
  - Repository for disk images
  - Macintosh license service (KeyServer)

APS Servers

Macintosh Servers

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- Backup Services
  - First tapeless backup at APS
  - RAID-based

Backup Servers and RAIDs

Macintosh Servers

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  - Repository for disk images
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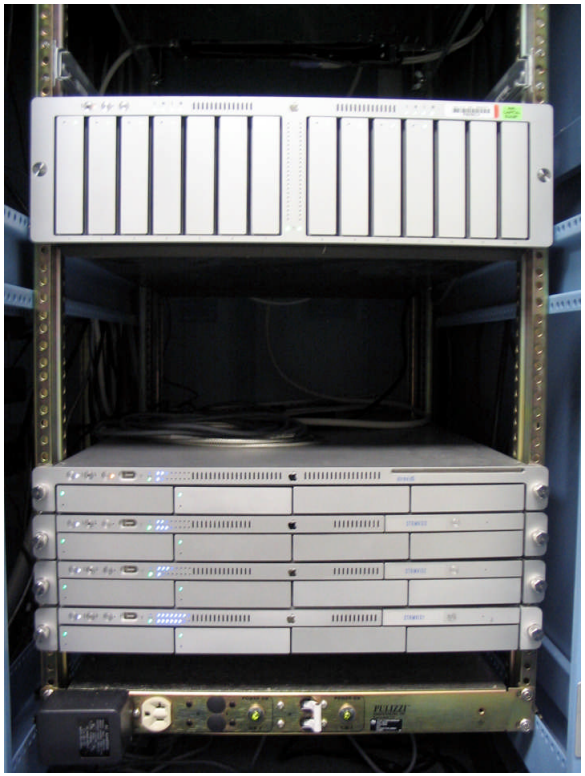
- Backup Services
  - First tapeless backup at APS
  - RAID-based
- ASD Streaming Video Servers
  - Do all upgrades and configuration

QuickTime™ and a
H.263 decompressor
are needed to see this picture.



ASD Video Streaming Servers

Macintosh Servers

- APS Servers
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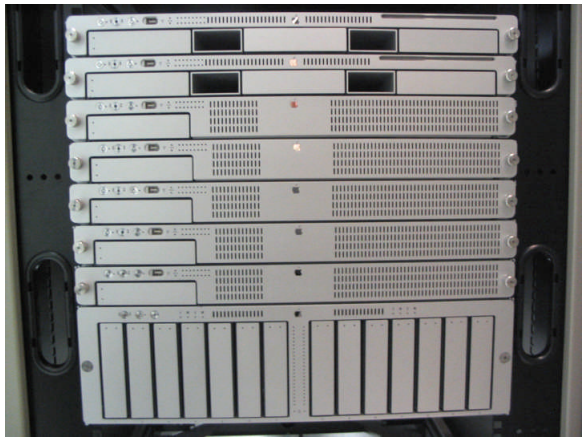
  - Shared applications
  - Repository for disk images
  - Macintosh license service (KeyServer)
- Backup Services
  - First tapeless backup at APS
  - RAID-based
- ASD Streaming Video Servers
  - Do all upgrades and configuration
- CNM Servers
  - Web
  - File Services
  - MySQL data base
  - Small cluster (5 machines) for cluster testing



CNM Servers

Current Macintosh Initiatives

- Automate system maintenance via ARD
- Set up new RAID-based backup system
- Upgrade the remainder of the pre 10.3 systems
- Upgrade G3 Class computers
- Configure the new APS servers

Future Macintosh Initiatives

- Automate system installs and major upgrades using NetBoot
- Move user base to Mac OS 10.4.x
  - Use the Netboot process to do this upgrade
  - Install the latest APS specific packages
- Move users to Personal Home Directories (PHD) for added reliability
  - This is a time consuming manual process
- User education
- Set up Jabber server
- Set up Update Server to provide tested updates only

Conclusion

- Macintosh acceptance and usage is growing at APS and ANL
- The Macintosh has proven quite useful for scientific Applications
- The number of Machines we support is growing
  - We are still maintaining older Machines (slow)
  - Laptop computers are increasing (hardware reliability and backup issues)
  - We now support 27 servers and 6 RAID units with more on the way
- We are trying to improve the support we offer by automating as many tasks as we can.
- We are continuing to offer Macintosh users more services